



03 November 2017

The View: seeing is believing

Despite the lack of enthusiasm in an event packed week, we continue to favor higher rates in both the EU and US. Ongoing improvements in global growth will be a key driver of this theme.

— R. Preusser, S. Rajan

Rates: settling some of the unknowns

US: Changes in Treasury issuance strategy should support additional swap spread curve steepening. Fed focus shifts to the four Board vacancies which should support steeper front-end curves.

EU: Fading re-investment flows should support 10y Bund yields trading higher and more consistent with solid economic growth and peripheral risk-on sentiment. We recommend shorting 10y Bunds vs 1y1y EUR receiver at flat carry.

UK: A dovish BoE hike saw the front end flatten aggressively. We close our Dec17-Dec18 flattener onside and reiterate our short in 3y cash versus OIS.

AU: Mid-curve carry should be supported by November reinvestment flows, narrower AU US 10yr spreads and less supply in December. We retain a bias toward steeper curves.

— M. Cabana, E. Satko, S. Salim, S. Cross, M. Capleton, P. Sam, T. Morriss

Front end: MMF repo update

US: Repo availability to money market mutual funds has increased over recent years, and should continue to grow driven by European, Japanese, Canadian and non-traditional repo providers.

— M. Cabana, O. Lima

Spreads: best of both world

US: We continue to like 30y swap spread wideners and 2y spread tightenings, but the combination might be the best.

EU: We close our German 5y swap spread widener on the back of an anticipated shift in Q4 supply/demand and shift to a SSA front-end widener as a cheaper risk-off hedge

— R. Axel, S. Salim, E. Satko

Technical: what confirms a large US bond market top?

Price action in front month US 30y treasury future rolled over in September. This could be the peak of right shoulder of a bearish head and shoulders top. While many technicals are aligning with this pattern, price could start to confirm it with a monthly close below the 50m SMA at 151-13. More importantly a close below the 150 neckline.

— P. Ciana

Rates Research

Table of Contents

Our medium-term views	2
Our key forecasts	2
What we like right now	2
The View	3
Rates – US	4
Rates – EU	6
Rates – UK	8
Rates – AU	10
Front end – US	12
Spreads – US	14
Spreads – EU	16
Technicals	18
Rates Alpha trade recommendations	19
Global rates forecasts	22
Research Analysts	27

Global Rates Research MLI (UK)

Ralf Preusser, CFA
Rates Strategist
MLI (UK)
+44 20 7995 7331
ralf.preusser@baml.com

Shyam S. Rajan
Rates Strategist
MLPF&S
+1 646 855 9808
shyam.rajan@baml.com

See Team Page for List of Analysts

Our medium-term views

	Rationale
Duration	<ul style="list-style-type: none"> US: With the market now pricing 80% chance of a December hike; we turn neutral the front end of the curve. We remain short the 5y-10y point on the belief that tax reform chances are higher than priced in and will push term premium 40-60bp higher if passed. EU: We expect EUR duration to move more in line with the (improving) economic data and the effective reduction in the amount of duration the ECB absorbs in Bunds through QE. Still, in swaps, we continue to see potential for EUR rates to outperform US, especially in 5y5y forward UK: structurally bearish Gilts on stretched cross-market valuations and need for a political risk premium. Favorable near-term supply/demand dynamics tempers this bias.
Front end	<ul style="list-style-type: none"> US: The Fed set a low hurdle for a December hike and a high hurdle for stopping the balance sheet unwind, which should result in tighter funding conditions & greater repo specials over time. Bill supply will be subdued (+\$100bn) in the near term due to the debt limit but should increase heading into year end. UK: We like being short 3y Gilts vs. OIS on no further BoE hikes, Brexit risks and expectations of a bearish Budget. EU: We are neutral as the market has now pushed the pricing of 1st 10bp ECB Depo hike to Q2 2019, consistent with an end of QE in Dec18 and a 6m period between the end of purchases and the first hike. Fwd guidance may be strengthened further down the road, but markets may not price this over coming weeks AU: We anticipate for the case to build for an eventual modest normalization of RBA policy, but not until next year. The AUD OIS curve is relatively flat and we like 5m vs 12m OIS steepener.
Curve	<ul style="list-style-type: none"> US: We maintain the view that the curve should steepen from here as terminal rate and term premium pessimism fades. We believe easier fiscal policy, higher deficits and higher inflation expectations is likely to steepen intermediate curves (2s-5s, 3s-7s) EU: in swaps, corporate issuance in 10s and potential ESM paying can continue to push the curve steeper. We hold a 3m 10s30s conditional bear steepener. In cash, much will depend on the maturity of ECB purchases going forward vs maturity of treasury issuance. We believe any significant long-end steepening in core and peripheral curves will ultimately see both debt agencies cut down on the maturity of their issuance and the ECB QE move further out the curve. JP: We see the JP curve steepening through 2017 as the BoJ steps back from intervening in quantities AU: We expect the 5s-10s curve to steepen, driven by the attractive mid-curve carry opportunities while higher inflation and supply weigh on the long-end. UK: Gilt flows suggest continued demand for ultra-long end cash. We like being long UKT 2068s versus 10y20y swaps.
Inflation	<ul style="list-style-type: none"> US: We turn bullish on breakevens as the USD impact should start to pass through while consensus remains overly bearish. EU: Underlying "lowflation" forces are being masked by base effects lifting inflation temporarily. We would be short 10y10y EZ inflation versus US. UK: We like 10s50s real curve flatteners. Forecast slide in inflation makes front-end expensive and November index events should prompt rebalancing longer.
Spreads	<ul style="list-style-type: none"> US: 30y spreads biased wider but risk of increased deficits adds a tightening threat, mostly in the 7y sector. GSE reform risks have increased. EU: While we see clear supply risks for the periphery early next year, the ECB's strive for predictability and the fact it maintained an open ended QE favor carry trades in the near term. This could lead 10y BTP-Bund spreads to break the 140bp levels. We still like 5y swap spread widenings as a tail risk hedge. AU: RBA risks have changed. We now see cross market spread compression looking more mature.
Vol	<ul style="list-style-type: none"> US: Our analysis suggests that 2s-5s now has room to bull steepen if rates were to decline from here. We recommend conditional bull steepeners to hedge against risk events that could lower near term hike probabilities. Further out the curve, we think payer skew is cheap. EU: The ECB's decision points to low rates for longer and low volatility, ie a continuation of the Mar16-Oct17 environment. Vs rates, vol remains cheapest in intermediate expiries on 10y and 30y tails, and are least cheap the top left (likes of 1y1y, 1y2y). We still hold a 2y5y payer ladder.

Our key forecasts

(% EOP)	2015	2016	2017	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18
Fed Funds	0.25-0.50	0.5-0.75	1.25-1.5	1-1.25	1-1.25	1.25-1.5	1.5-1.75	1.75-2	2-2.25
10-year treasuries	2.27	2.44	2.85	2.30	2.33	2.85	2.85	2.85	2.85
ECB refi rate	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10y Bunds	0.63	0.21	0.55	0.47	0.46	0.55	0.60	0.65	0.70
BOJ	0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
10y JGBs	0.26	0.05	0.07	0.09	0.07	0.07	0.08	0.08	0.10
BoE base rate	0.50	0.25	0.50	0.25	0.50	0.50	0.50	0.50	0.50
10y Gilts	1.96	1.24	1.50	1.26	1.37	1.50	1.60	1.80	2.00
RBA cash rate	2.00	1.50	1.50	1.50	1.50	1.50	1.50	1.75	1.75
10y ACGB	2.88	2.77	3.00	2.66	2.84	3.00	3.10	3.20	3.25

Source: BofA Merrill Lynch Global Research

What we like right now

AMRS We like 2s-5s curve steepeners, short US 5y5y vs EU, wider 30y spreads and 5y breakeven longs.

EMEA In EUR, the ECB's decision gives another green light to carry trades. In the UK, we hold a Dec17-Dec18 OIS curve flattener.

APAC We like steepeners in Japan and Australia.

For a complete list of our open and closed trade ideas, please refer to Rates Alpha trade recommendations.

The View

Ralf Preusser, CFA
MLI (UK)
ralf.preusser@baml.com

Shyam S.Rajan
MLPF&S
shyam.rajan@baml.com

The week that will be

We continue to favor higher rates in both the EU and US. Ongoing improvements in global growth will be a key driver of [this theme](#), and continued strong performance of risk assets, especially in Europe (Eurostoxx reaching 3700, peripheral spread at their tightest in more than a year), should favor less demand for haven assets. With that in mind, we now recommend holding tactical, carry-efficient, short positions in EU rates. In the US, we continue to expect higher rates, though this view is highly contingent on fiscal progress and financial de-regulation which should contribute to a higher r^* .

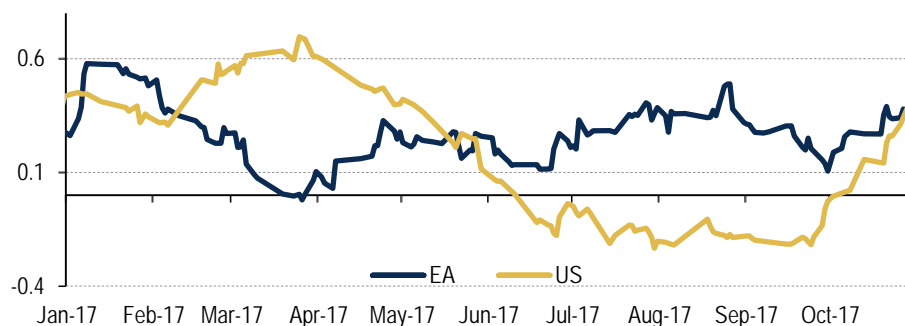
Next week, markets will remain focused on the ongoing negotiations in the US tax reform process. The lukewarm reception to the initial plan roll out reflected skepticism over the House's ability to reach consensus on scaling back popular provisions to pay for their broader set of ambitious tax cuts. Given this reaction, we believe there is a low threshold for a positive surprise and think that term premiums could rise if House Republicans can pass a plan by the end of this month. We will also hear from the new Fed Vice Chair of Supervision, Randall Quarles, who may provide some initial thinking on the scope of adjustments he will make to financial regulations.

Outside the US, we will receive several global PMIs and Chinese trade data. President Trump will be travelling in Asia and US-China relations will be a particular focus given recent tensions regarding trade and North Korea.

The week that was

The low vol environment was not disrupted by data or changes in monetary policy this week. Eurozone data continues to reflect a goldilocks environment and the Fed's employment cost index showed ongoing improvements in wages (it is yet to be seen if Friday's average hourly earnings confirms this trend). The Bank of England provided dovish messaging to accompany their rate hike and President Trump's choice of Jay Powell as the next Fed Chair did little to alter near-term gradual rate hike expectations in the US (December remains over 80% priced). Perhaps the most notable surprise on the week was a shift in debt issuance strategy from the US Treasury that favors belly supply vs WAM extension and supports our existing swap spread curve steepening views.

Chart 1: Data surprising already bullish expectations on the upside in both the US and the EA



Source: BofA Merrill Lynch Global Research, Bloomberg

Rates – US

Mark Cabana, CFA

MLPF&S

mark.cabana@bamf.com

- The Q4 refunding discussion reiterated our views on swap spread curve steepeners as Treasury shifted strategy from WAM extension to belly issuance
- With dust settled on the next Fed chair the focus moves to the vice chair and other Board seats; this risks a hawkish shift that could further steepen the front end

The refunding analysis is an excerpt from [US Rates Watch](#) on Nov. 11

This week settled two large rates markets questions: (1) Treasury issuance strategy (2) the next Fed Chair. We detail thoughts below and believe that the shift in Treasury issuance strategy should support additional swap spread curve steepening. The selection of Powell as Fed Chair still leaves 4 Board seats open and the shift in regional Fed bank composition next year should help our view for steeper front-end curves.

Treasury refunding indicates supply increases in February

The November Treasury refunding announcement was largely in-line with our expectations as [detailed here](#). Treasury announced they would maintain current coupon auction sizes in the upcoming quarter but gradually adjust “nominal coupon and 2-year FRN auction sizes” at the February refunding. The Treasury Borrowing Advisory Committee (TBAC) discussion reflected agreement that Treasury “focus on increasing issuance in bills and the 2-, 3-, and 5-year sectors, while maintaining issuance at the long-end such that the WAM does not materially change from current levels”.

Table 1: Treasury financing estimates, fiscal year (\$bn)

Item	2018	2019
1 Deficit	645	690
2 Change in Cash Balance	100	0
3 Other funding need	90	90
4 Total borrowing need (1+2+3)	835	780
5 Amount raised w/ constant sizes	2,047	2,047
6 Amount maturing	1,831	1,935
7 Net raise (4-5)	216	112
8 Fed reinvestment	196	123
9 Fed rolloff	175	284
10 Net raise incl Fed (7+8)	412	235
11 Net financing surplus (need) (10-4)	-423	-545
12 Increase in coupon funding	173	432
13 Increase in bill supply ((12+11)*-1)	250	113

Source: BofA Merrill Lynch Global Research, US Treasury, FRBNY

Exhibit 1: Expected increase in Tsy auction sizes vs current (\$bn)

	2Y	3Y	5Y	7Y	10Y	30Y	5YII	10YII	30YII	2YFRN
Oct-17	0	0	0	0	0	0	0	0	0	0
Nov-17	0	0	0	0	0	0	0	0	0	0
Dec-17	0	0	0	0	0	0	0	0	0	0
Jan-18	0	0	0	0	0	0	0	0	0	0
Feb-18	1	1	1	1	1	1	0	0	0	0
Mar-18	2	2	2	2	1	1	0	0	0	0
Apr-18	3	3	3	3	1	1	0	0	0	1
May-18	4	4	4	4	2	2	0	0	0	1
Jun-18	5	5	5	5	2	2	0	0	0	1
Jul-18	6	6	6	6	2	2	0	0	0	2
Aug-18	7	7	6	6	2	2	0	0	0	2
Sep-18	8	8	6	6	2	2	0	0	0	2
Oct-18	9	9	6	6	2	2	0	0	0	2
Nov-18	9	9	6	6	2	2	0	0	0	2
Dec-18	9	9	6	6	2	2	0	0	0	2

Source: BofA Merrill Lynch Global Research, US Treasury

Based upon these communications and our expectation for Treasury funding need, we have only modestly adjusted our forecast for upcoming changes in coupon sizes to incorporate the specific mention of 2Y FRNs (Table 1). We continue to believe that Treasury will announce increases to all nominal & FRN auction sizes by \$1bn at the February refunding but gradually grow sizes of 2-7Y maturities much larger than 10 & 30Y points (Exhibit 1). We expect that Treasury will incorporate a small increase in 10 & 30Y sizes to ensure that the portfolio WAM remains relatively stable over coming years (Chart 2). Through the end of 2018 we see 2 & 3Y tenors increasing \$9bn, 5 & 7Y tenors

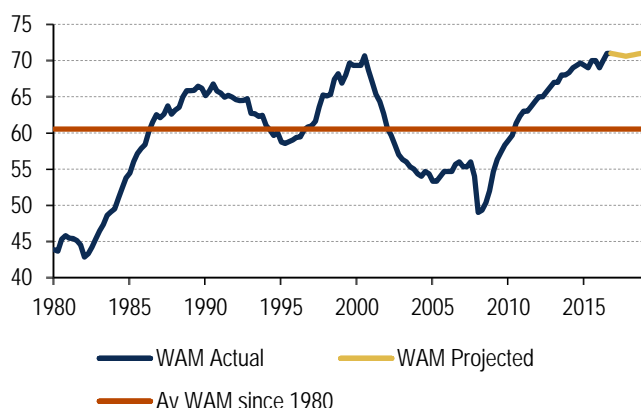
rising \$6bn, and 10 & 30Y maturities rising \$2bn. We also expect that Treasury will gradually grow 2Y FRNs \$2bn starting with the new issue in April. Risks to this view include: (1) more rapid 2 & 3Y increases in February, especially if meaningful tax reform is passed (2) larger increases in 5Y notes beyond capacity indicated by the primary dealer survey (3) no increase in 10 & 30Y supply.

Shift in focus from WAM extension to belly issuance

We believe today's refunding communications mark an important shift in Treasury's strategy that will place less emphasis on extending WAM and more focus on issuance concentrated in the belly. Communications today referenced diminishing benefits from a further WAM extension given that Treasury's WAM is already at multi-decade high (Chart 2). This shift further decreases the need for ultra-long or 20Y issuance for which Treasury Secretary Mnuchin has stated "Treasury doesn't see a lot of demand". With the reduced focus on extending WAM Treasury will likely focus more on issuance in the belly of the curve given TBAC models suggest reduced debt service cost & variability from such issuance. It also means Treasury may focus issuance in the belly that could have been in bills, though the share of bills to total debt outstanding will likely rise over time.

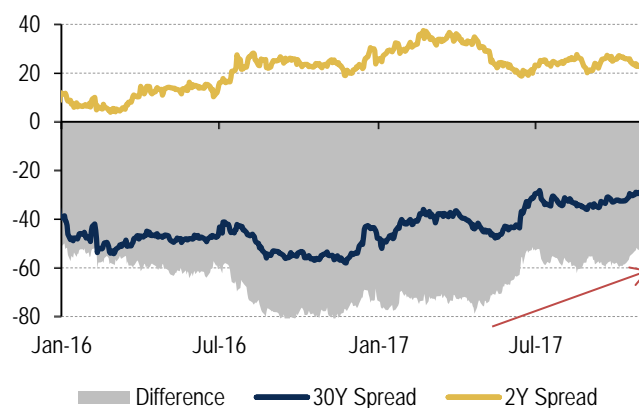
From a market perspective, today's communications reinforce our previously held views for a steeper swap spread curve (Chart 3). Price action around the refunding announcement shows a high sensitivity of spreads to supply. We have [recommended selling 2Y Tsy vs OIS](#) due to expectations for larger front-end coupon sizes as well as a reversal in foreign official demand. We have advocated for [30Y spread widening](#) due to supply and regulatory factors, though higher deficits pose a risk to this view.

Chart 2: Treasury WAM likely to remain near current levels (months)



Source: BofA Merrill Lynch Global Research, US Treasury

Chart 3: Swap spread curve has recently steepened (bps)



Source: BofA Merrill Lynch Global Research, Bloomberg

Debt limit: Treasury only confident to pay bills through Jan

Treasury indicated that debt limit extraordinary measures will only allow the government to meet its obligations through January. Treasury likely only committed to this date due to uncertainty with Q1 tax refunds; we believe they will be able to operate until March. Bills maturing in Feb cheapened up to 3 bps following the announcement.

Fed chair: Powell nomination shifts focus to vice chair

With the dust settled on the nomination of the next Fed Chair, the market focus shifts to the nomination of the Vice Chair and other Board seats. Assuming that Yellen resigns when her term as Chair ends in early February, the Powell selection will leave 4 Board seats vacant. We continue to believe there is a good possibility President Trump appoints a conservative economist to fill the Vice Chair seat (ex. Taylor), which would be seen as hawkish and reverse some of the front end curve flattening this week. This, coupled with the more hawkish shift in regional Fed bank composition next year, should help support our view of steeper front-end curves (ex 2-5s, 3-7s).

Rates – EU

Erjon Satko

MLI (UK)

erjon.satko@baml.com

Sphia Salim

MLI (UK)

sphia.salim@baml.com

- Fading record-high re-investment flows should support 10y Bund yields trading at levels (higher) more consistent with solid economic growth and peripheral risk-on sentiment. We recommend shorting 10y Bunds vs 1y1y EUR receiver at flat carry.

Bunds: if not short now, when?

We think that the positive economic surprises in both the US and Euro Area, [improved sentiment towards periphery](#) along with the reduction of supportive bond flows in the latter region creates the environment for 10y Bunds to break above 50bp by year-end.

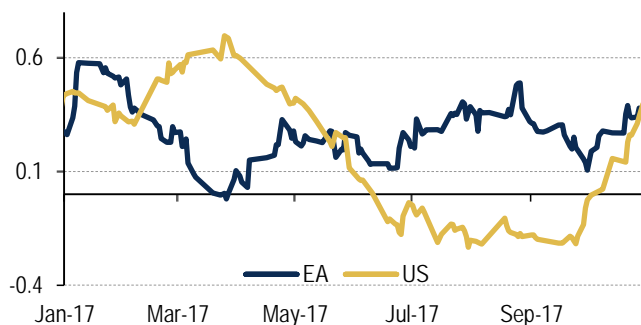
Data surprises support optimism towards economic growth

Chart 4 shows that since the start of October, economic data has surprised significantly on the upside in both the US as well as the Euro Area. In the Euro Area, our economists point that also thanks to solid economic growth globally, the 4Q GDP growth tracker rose to an annualized 2.3-2.4% q/q growth (well above the 2.0% expectation).

Improved sentiment towards periphery suggests less demand for “safe-havens”

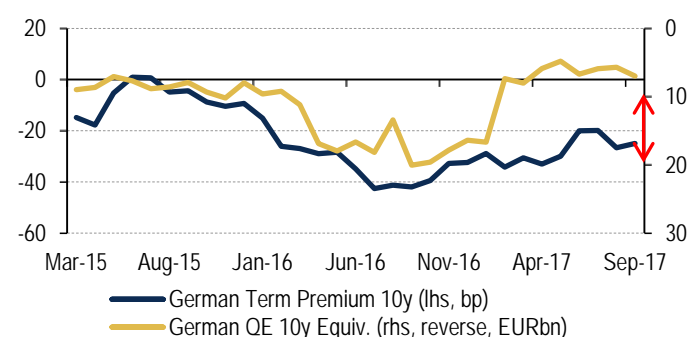
We argued that part of the reason why Bund yields are comparatively low ([will remain so vs US](#)) is due to the structure of the Eurozone and the fact that the flip-side of negative sentiment towards the periphery is the relative “safe-haven” demand into Bunds. This effect can be seen in the low level of 10y German term premium (Chart 5). True, low volatility and “tight” inflation expectations also contribute to [justifying lower term premium](#), but these are slow-moving variables when compared to shifts in risk sentiment. Therefore, the [recent positive shift in sentiment towards the periphery](#) argues for the term premium to edge higher and close, partially, the current 15bp gap vs “fair” level.

Chart 4: Data surprising already bullish expectations on the upside in both the US and the Euro Area



Source: Bloomberg

Chart 5: The reduction in safe-haven demand for 10y Bunds should close part of the Term Premium vs QE flows gap (currently at over 15bp)



Source: BofA Merrill Lynch Global Research, ECB.

Bunds should re-price now that high re-investment flows fade

The last three weeks have seen record high density of coupon and redemption flows originating from all the main Eurozone bond markets (c. €110bn). The [Euro govie bond index also extended by +0.12y](#) in duration this month-end. [We think it is mainly down to these flows that 10y Bund yields trade >7bp lower than early October levels.](#) Therefore, as these flows are set to disappear in November-December, we believe EUR rates will resume increasing and German swap-spreads see tightening pressure.

Recommend shorting 10y Bund with Carry&Roll sweetener

Through-out the year we have often resisted recommending an outright short in Bunds and indeed have historically remained more bullish relative to the forwards. Part of the reason is also related to our anticipation of persisting low volatility and negative net supply in Bunds which sets a high bar for any negative carry position to be convincing.

While volatility is still expected to remain low, net supply is still negative but bouncing up from October's -€74bn to the -€10bn (second highest monthly net supply of 2017) and -€28bn for November and December respectively. Mixing these points together with the decreasing demand factors listed above supports the view for tighter German swap spreads and for Bunds to sell off but not reach the altitudes of some forecasts – [we expect 10y Bunds reaching 55bp by year-end](#).

Receive 1y1y to efficiently zero-out the negative Carry&Roll on the Bund short

This said, even though we have identified the catalysts for a sell-off we remain wary of the possibility that Bunds could trade range-bound until the end of December: we therefore suggest reducing the negative carry of the outright 10y Bund short by using a low-directionality/high Carry & Roll (C&R) Euribor receiver.

While Table 2 shows that 3y1y and 4y1y are the most efficient points to earn 3m C&R, we would recommend not attaching them to a 10y Bund short. In fact, we cannot rule out significant shifts in ECB rate hike expectations (now pricing in a full 10bp hike in June 2019) in the years following the termination of QE by January 2019.

Instead, we prefer using the 5bp in 3m C&R offered by the 1y1y receiver because 1) we expect it to remain less directional on a term-premium repricing 2) it is less subject to ECB rate hike expectation re-pricing (upwards) while 10y rates remain pinned down.

In other words, shorting 10y Bunds while receiving EUR 1y1y achieves 3m C&R neutrality while maintaining a net negative portfolio PV01 (owing to a lower and more stable "Beta" vs 10y rates relative to the 2y1y and 3y1y). Indeed, the realized portfolio PV01 is dependent on the actual future 1y1y EUR vs 10y Bund "Beta": we have estimated the total portfolio PV01 amounting to 85% and 45% of an outright 10y Bund short on respectively base case beta (regression slope estimate over 3m) and "adverse scenario" beta. Therefore, at flat carry, the position remains a short by a large margin.

We go short the DBR Aug26 at 21bp targeting 35bp and with a stop at 14bp.

We also recommend receiving EUR 1y1y (based on Euribor 6m) at -13bp in order to achieve flat portfolio Carry & Roll over 3 months (with a swap vs bond notional ratio at c. 10.4:1). We thus like to position for German swap spread tightening and curve bear steepening on an arguably much cleaner positioning following the last ECB meeting.

The risk for the trade is whether ECB speakers in Q4 push the market pricing of rate hikes meaningfully above the current 10bp hike by June 2019 while the economy slows down or term-premium fails to increase as expected.

Table 2: Where is the carry in 6m Euribor swaps

Tenor/Forward	Spot	3m	6m	1y	2y	3y	4y	5y	6y	7y	8y	9y	10y
1y	1.3	1.7	2.9	5.0	7.8	8.0	8.0	7.1	6.6	6.1	5.1	3.9	2.8
2y	3.4	4.0	5.1	6.4	7.9	7.9	7.6	6.9	6.4	5.6	4.5	3.3	2.3
3y	5.0	5.6	6.1	6.9	7.9	7.6	7.3	6.7	5.9	5.0	3.9	2.8	1.8
4y	5.7	5.9	6.6	7.1	7.6	7.3	7.1	6.3	5.5	4.5	3.3	2.3	1.5
5y	6.1	6.2	6.7	7.0	7.4	7.1	6.7	5.8	4.9	3.9	2.9	2.0	1.1
6y	6.2	6.2	6.8	6.9	7.2	6.7	6.2	5.3	4.4	3.4	2.5	1.6	0.9
7y	6.3	6.3	6.6	6.8	6.8	6.4	5.7	4.8	3.9	3.0	2.1	1.3	0.6
10y	5.8	5.8	6.0	5.9	5.6	5.0	4.4	3.6	2.8	2.0	1.3	0.7	0.1
15y	4.3	4.2	4.3	4.1	3.8	3.3	2.8	2.2	1.6	1.0	0.6	0.1	-0.2
20y	3.1	3.0	3.1	3.0	2.7	2.3	2.0	1.5	1.1	0.7	0.3	0.0	-0.3
30y	2.1	2.0	2.1	2.0	1.8	1.6	1.3	1.0	0.7	0.4	0.1	-0.1	-0.3

Source: BofA Merrill Lynch Global Research. Carry & Roll numbers are expressed in basis points and expressed over a three month period.

Rates - UK

Sebastien Cross

MLI (UK)

sebastien.cross@baml.com

Mark Capleton

MLI (UK)

mark.capleton@baml.com

- A dovish BoE hike saw the front end flatten aggressively. We close our Dec17-Dec18 flattener onside and reiterate our short in 3y cash versus OIS.

The reluctant hikers

The BoE delivered their first hike in 10 years this week, with the MPC voting 7-2 in favour of the move. However, the delivery of the hike saw the market rally aggressively in response, with 5y cash 10bp lower on the day. Our recommended Dec17-Dec18 MPC-dated OIS flattener moved over 10bp on the day as the market pushed back its pricing of a subsequent rate hike to the end of 2018. Despite continuing to expect no further hikes from the BoE this year or next, we reassess the flattener. We move our focus instead to reiterate our recommended short in 3y cash versus OIS.

Market focused on removal of BoE curve guidance

We recommended a Dec17-Dec18 OIS flattener back in September as the BoE signalled potential for a hike in 'coming months' as we thought any hike was unlikely to be followed by subsequent hikes. Heading into this week's BoE meeting [we expressed some caution](#) about the prospects for this trade; while we thought it would ultimately be the right trade we were concerned the BoE could deliver a hawkish hike.

The BoE instead delivered a dovish hike this week (see '[Less hike, more ramble](#)'), with the market seeming to focus particularly on the removal from the minutes of the line:

"if the economy were to follow a path broadly consistent our central projection, then monetary policy could need to be tightened by a somewhat greater extent over the forecast period than current market expectations."

Moves potentially overdone- we close our flattener

The market rallied aggressively as pricing in of subsequent rate hikes was pushed back. Our micro OIS flattener ended the day at 26.5bp and we close it here.

While we continue to see no further hikes from the BoE we are concerned that the scale of the reaction may mean we see some reversal in the coming days. Part of this move was likely driven by stop outs in our view, with Wednesday's sell off suggesting people added to shorts or removed longs heading into the meeting. Furthermore the BoE is unlikely to be comfortable with the scale of the curve's reaction to their communication and we some risk that they try to reverse some of this move in the coming days or weeks.

We see better ways to position for a one and done

We recommended being short UKT 3.75% 2020 versus OIS back in March (currently at -27.3bp, entered at -26.4bp, targeting 0bp and with a stop -40bp). We liked the trade then as we thought the richening in front end cash was overdone and we saw it as a good, carry-positive hedge for a breakdown in the Brexit negotiations. We have found more reasons since to like this trade.

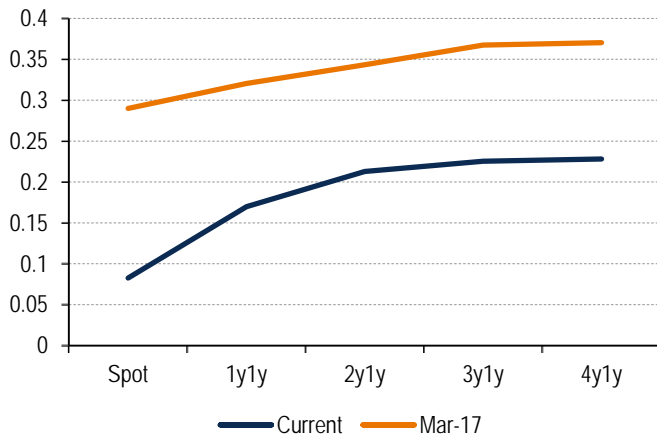
Firstly with the BoE out of the way the next risk event for the Gilt market is the November budget in our view, where we expect the government to revise up its expected path for the deficit considerably. We see this as a force for cash underperformance versus swaps. We particularly like the trade versus OIS as a way to position for our forecast of no further rate hikes. The risks to the trade continue to be strong overseas buying of front end Gilts.

Basis tightening headwind so far, but we see little scope for further tightening

Chart 6 shows the move in the front end of the Sonia-6s basis curve since March this year. The continued uptake of the Term Funding Scheme by UK banks (£89bn to date) has led to a significant easing of GBP funding conditions, which has consequently driven the considerable tightening in the basis as Libor fixings have fallen. This has worked against us in this trade so far, as highlighted in Chart 8.

However with the spot basis now down at 8bp and 2y1y at post-crisis lows we see little scope for a further tightening from here. Banks will no longer be able to increase their drawings from the scheme in February next year and with the cost of funding in the scheme tied to Bank rate, this week's rate hike will likely have made it less attractive on the margin.

Chart 6: Change in the front end of the OIS – 6m Libor basis curve, %



Source: BofA Merrill Lynch Global Research

Rates - AU

Phear Sam

Merrill Lynch (Australia)
phear.sam@baml.com

Tony Morriss

Merrill Lynch (Australia)
tony.morriss@baml.com

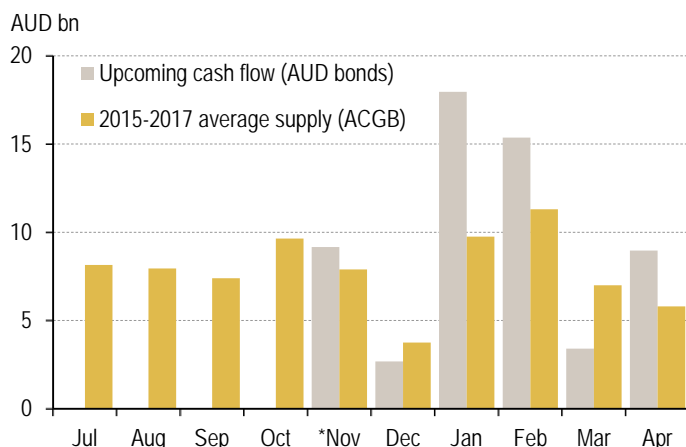
- We expect rates to remain on hold for the 15th consecutive month. The gradual approach to more normal policy settings keeps the curve steep in the near term.
- Mid-curve carry exposures are likely to benefit from November reinvestment flows, narrower AU US 10yr spreads and as supply steps down in December.

RBA sidelined

The Reserve Bank of Australia (RBA) meets on 7 November and we expect rates to remain on hold for the 15th consecutive month following muted inflationary pressures in the September quarter. The Bank now appears to have even more flexibility over guidance on policy and makes AU rates more attractive for carry strategies. However, the overall core momentum still supports more normal policy settings over time and we [expect a move higher in May](#) next year.

The improvement in mid-curve carry prospects from a more patient RBA is also likely to find support from November reinvestment flows and as supply steps down in December. We estimate around AUD 9bn of cash flow from coupons and the redemption of high quality AUD bonds this month. The monthly gross call on markets by the Australian Office of Financial Management (AOFM) has typically been modest in December relative to November and January averages in recent years (Chart 7).

Chart 7: Monthly supply averages and upcoming cash flows

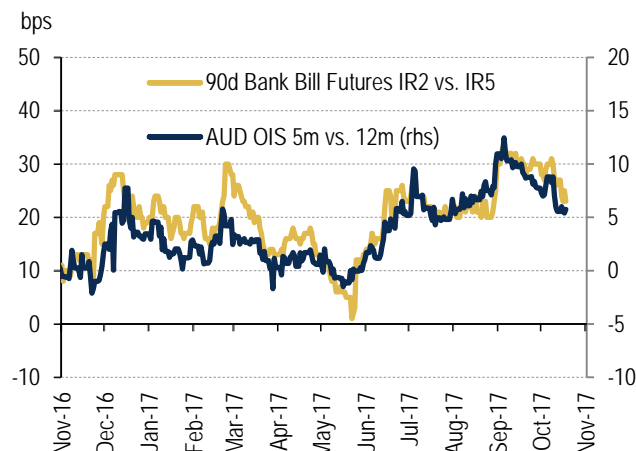


Source: BofA Merrill Lynch Global Research, Bloomberg, AOFM

The potential supply and demand imbalances in January/February (Chart 7) and reduced attraction for longer-dated AU lines from narrower AU US 10yr spreads, likely increases demand for mid-curve AU rates that benefit from more favorable carry opportunities. Notably, the AOFM has already completed nearly 40% of their funding requirements for the current fiscal year (ending June-2018) and is around AUD 4bn ahead of their borrowing schedule.

Valuations around front-end curves currently show an expectation of a later start to the RBA's move to more normal rate levels than expected in July (Chart 8). The market has moved to unwind some of the more aggressive tightening expectations seen in September. In our view, there is limited flattening scope for both AUD OIS and Bank bill futures curve in the near term without starting to reflect the possibility of even easier policy by the Bank and would be inconsistent with the growth outlook.

Chart 8: Front-end curves even flatter than July 2017 expectations



Source: BofA Merrill Lynch Global Research, Bloomberg

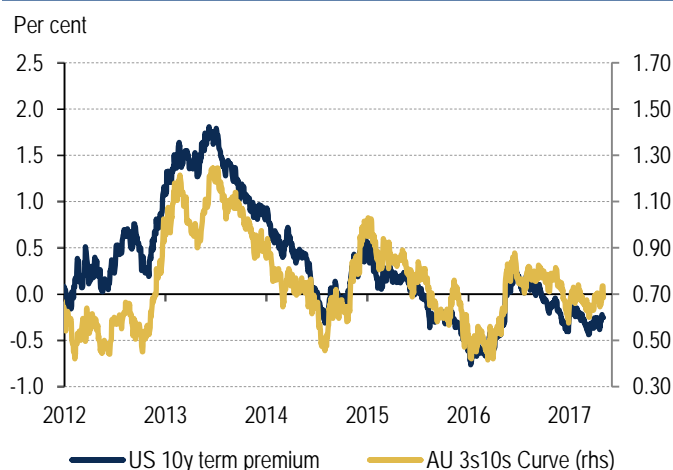
The RBA is set to remain on hold for the rest of the year and any further upside surprises from economic outcomes is more likely to bring forward expectations and pricing of tighter policy next year. This should steepen the AUD OIS curve prior to any formal guidance by the Bank. Our preferred expression is receiving [AUD OIS 5month and paying 12month](#), which is currently at 6bps and targets 25bps. Risk to the trade is an earlier shift in guidance by the RBA to normalize policy.

Increase in curve directionality

In our view, we expect the 3s-10s futures curve to remain steep in the medium term, underpinned by rising headline inflation in the coming quarters, consistent government bond supply and global factors weighing on the longer-end. The RBA stressing patience also increases curve directionality with global pressures in the near term (Chart 9) as market rates are not being particularly driven by domestic data.

Examining the [impact of the Fed's balance sheet unwind](#), we see the AU 3s-10s futures curve around 7bp steeper in 2018 and 34bps steeper for the full QE program unwind. For simplicity, these estimates are from isolating the impact from higher US 10yr term premium and do not include other factors. AU 10yr term premium have also shown to move higher in previous [US tax cut episodes](#) (Chart 9).

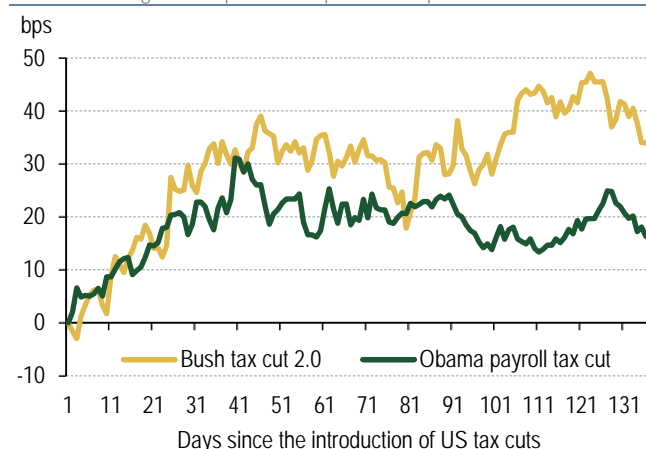
Chart 9: US 10yr term premium and directionality of AU 3s-10s curve



Source: BofA Merrill Lynch Global Research, Bloomberg, US Federal Reserve NY

Chart 10: AU 10yr term premium in past US tax cut episodes

Cumulative change in term premium in past tax cut episodes since 2008



Source: BofA Merrill Lynch Global Research, Bloomberg, AOFM

Our preferred expression for steeper AU curves is via a QTC June-2021 vs. ACGB Nov-2027 [mid-curve steepener](#). The current level is 43bp and targets 60bps. The position carries positively at net +6.3bp per quarter. A global return to a reach for yield and an earlier shift in guidance by the RBA to normalize policy is a risk to our curve view.

Upcoming key events

In addition to the RBA board meeting next week on 7th November, the Bank will also provide forecasts in their quarterly Statement on Monetary Policy on 10th November. In our view, there appears to be less scope for any upward revision to forecasts following [soft inflation](#) outcomes in Q3. Although, we see core inflation returning to the RBA's 2-3% target band in 1H 2018.

On 6th November, we receive the new CPI weights which apply to Q4 CPI and for the subsequent three quarters in 2018. [Our analysis](#) on the forthcoming changes to CPI expenditure weights suggest that rising utilities inflation will eliminate the upwards bias currently in the headline CPI (estimated to be around 0.1 ppts).

Front end – US

Mark Cabana, CFA
MLPF&S
mark.cabana@baml.com

Olivia Lima
MLPF&S
olivia.lima@baml.com

- Repo availability to money market mutual funds has increased over recent years, and should continue to grow driven by European, Japanese, Canadian, and non-traditional repo providers
- Aggregate US GSIB repo has generally been stable but recently shown signs of contraction on quarter end dates.

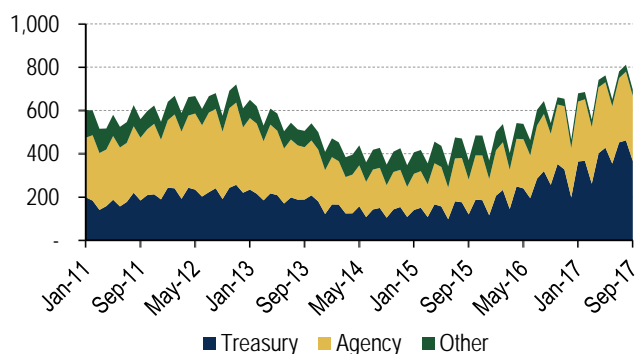
Originally published in [November 2 US Rates Watch](#).

Recent history of MMF repo activity

Each month the Office of Financial Research (OFR) releases data on money market fund (MMF) repo activity. We view this data as a good proxy for overall government securities repo activity, and use it to highlight trends and developments in the tri-party repo space with detail at the counterparty and fund level. The OFR measure of total repo ex-Fed is \$681bn for Treasury and \$295bn for Agency, which compares to FRBNY aggregate tri-party repo activity of \$965bn for Treasury and \$562bn for Agency MBS (Chart 11, Chart 12). If we include the Fed, the OFR data captures about 2/3 of total tri-party repo activity.

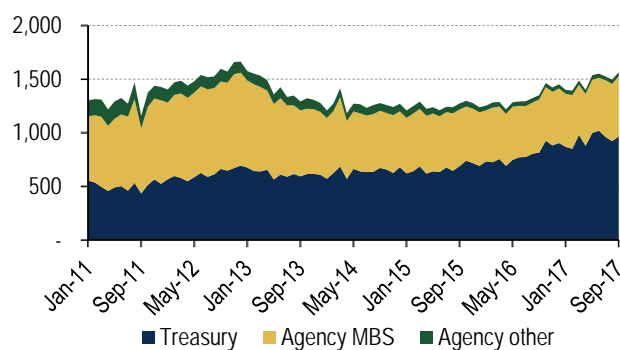
OFR data shows overall repo activity contracting in 2013 with the proposal of supplementary leverage ratio (SLR) rules, bottoming in early 2015 with required public disclosure of SLR, and growing over the past 2 years. Treasury MMF repo has more than doubled since the start of 2016, from \$310bn to \$681bn, largely driven by increased flows into government funds through 2a-7 reform and greater repo availability from non-US counterparties. Inconsistent SLR application globally has led to variation in repo activity around quarter end, especially from euro area firms who report SLRs as a snapshot on the last day of the quarter (discussed [here](#)).

Chart 11: OFR total MMF Repo ex-Fed, \$bn



Source: OFR, aggregated by BofA Merrill Lynch Global Research

Chart 12: NYFRB total tri-party repo, \$bn



Source: NYFRB, aggregated by BofA Merrill Lynch Global Research

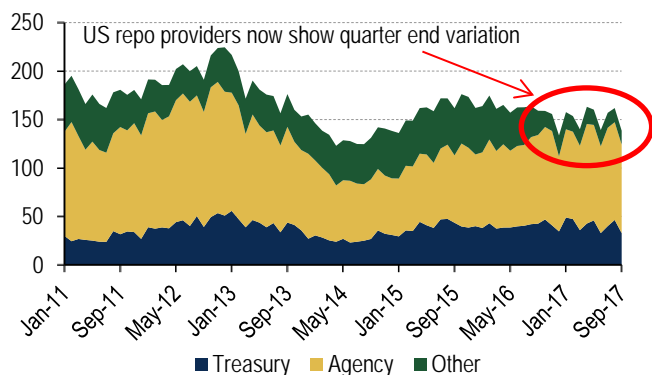
US & EU providers: contractions on quarter end

Aggregate US GSIB repo activity has generally been stable since SLR began being phased in during 2015. However, since the end of 2016 repo activity has begun to vary around quarter end dates (Chart 13). The exact catalyst for quarter-end contraction is not clear, especially since US SLR is reported as a daily average. Two possible explanations may be (1) the annual GSIB surcharge which incentivizes firms to shrink

balance sheets by the year-end snapshot date (2) internal firm requirements that seek to net down balance sheet on key reporting dates. According to OFR data there are varying degrees of quarter end contraction amongst US GSIBs, but is most concentrated at JP Morgan which accounts on average for nearly half of the swings since the end of 2016.

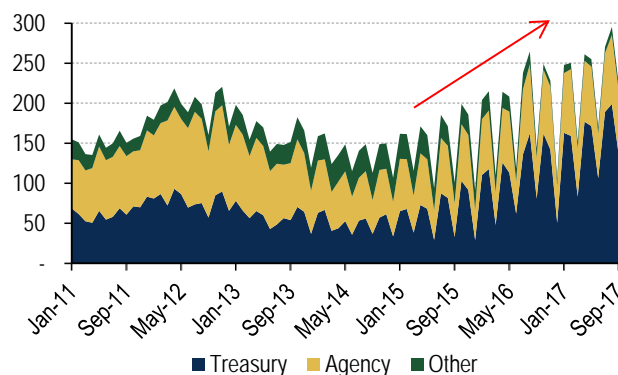
Since 2015, US repo activity by EU providers has seen an upward trend, with large swings in availability on quarter-end dates. Despite new rules on intermediate holding companies [we do not expect](#) European banks to contract their repo activity next year and believe repo activity at these firms will continue to grow (Chart 14). BNP remains the largest EU MMF repo counterparty in the US market and the largest overall MMF repo counterparty, comprising 15% of total MMF repo activity ex-Fed based on current data.

Chart 13: MMF repo by US GSIBs, \$bn



Note: US GSIBs are Bank of America, Bank of New York Mellon, Citigroup, Goldman Sachs, JP Morgan Chase, Morgan Stanley, State Street and Wells Fargo; source: OFR, aggregated by BofA Merrill Lynch Global Research

Chart 14: MMF repo by EU providers, \$bn



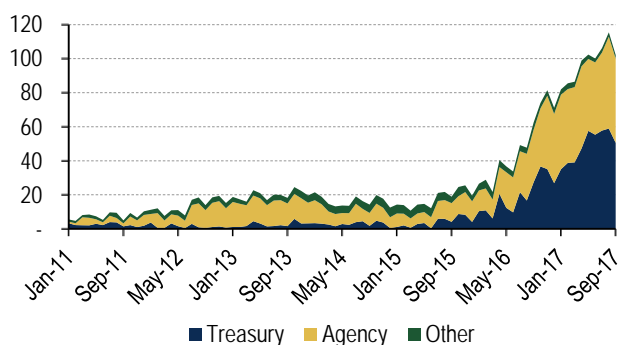
Note: top 5 EU providers include BNP Paribas, Societe Generale, Credit Agricole, ING Groep Nv, and Natexis + Natixis; source: OFR, aggregated by BofA Merrill Lynch Global Research

Japanese & Canadian providers: sharp increase in past 2Y

Repo provided by Japanese firms in the US market has been increasing since the start of 2016. Treasury repo has grown from \$10.5 to \$50.5bn and 46% of this growth has come from the current largest repo provider, Nomura (Chart 15). Since the start of 2015, repo provided by Canadian firms has also been increasing with Treasury repo growing from \$12.5 to \$68bn. Over 30% of this growth has come from the largest current Canadian repo provider, RBC (Chart 16).

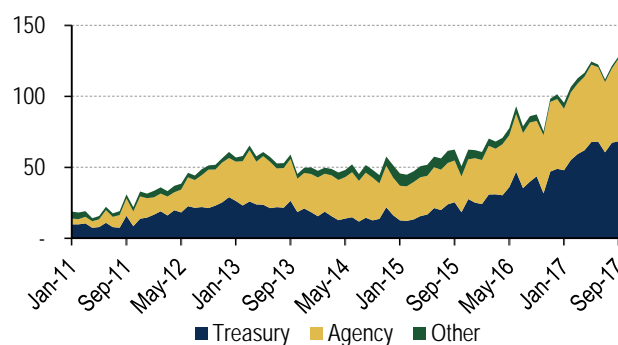
Other repo providers, Harvard, MetLife and Prudential, saw an increase in activity over 2015 and 2016, but plateaued in recent months at around \$9.5bn. Sponsored MMF repo activity with the Fixed Income Clearing Corporation has also grown (detailed [here](#)).

Chart 15: MMF repo by Japanese providers, \$bn



Note: top 5 Japanese providers include Nomura, Bank of Tokyo, Norinchukin Bank, Sumitomo Mitsui Bank, and Mizuho; source: OFR, aggregated by BofA Merrill Lynch Global Research

Chart 16: MMF repo by Canadian providers, \$bn



Note: top 5 Canadian providers are Royal Bank of Canada, Bank of Montreal, Bank of Nova Scotia, Canadian Imperial Bancorp, and Toronto Dominion; source: OFR, aggregated by BofA Merrill Lynch Global Research

Spreads – US

Ralph Axel

MLPF&S

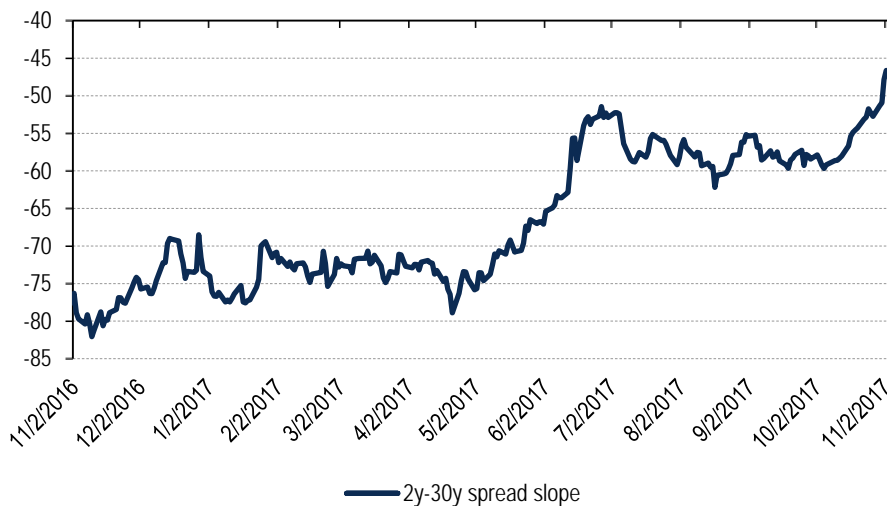
ralph.axel@bamf.com

- Tax cuts are a threat to 30y spreads, but 30y spreads should outperform 2y spreads even if tax cuts pass
- The Treasury clearly prefers 2y-5y over 10y-30y to handle growing deficits

Spread curve steepener = best of both worlds

The November Treasury refunding statement on the margin reduced risk of heavy long-dated issuance and simultaneously increased the scope for more short-dated coupon supply to accommodate the reduction of SOMA Treasury holdings ([US Rates Watch: Front-end spreads set to narrow 02 February 2017](#)). The magnitude of tightening of 2y spreads (-0.7bp) and widening of 30y spreads (+2.3bp) on the announcement underscores the high sensitivity of spreads to changes in Treasury supply. We still like the 30y spread widener and the 2y spread tightener as individual trades, but because of the increased potential for a tax-related deficit shock, the combination (short 2y spread vs long 30y spread) may offer the best risk/reward as we go into tax talks.

Chart 17: 2y-30y slope increased on financial reform in June and refunding announcement this week



Source: BofA Merrill Lynch Global Research

Historically we find that 30y spreads are the most sensitive to changes in the deficit, with about 10bp of 30y spread widening for each 1% improvement in the deficit relative to GDP ([Global Rates Weekly: Out of the abyss 15 September 2017](#)). But increases in Treasury supply were historically back-loaded on the curve, and this is set to change as the Treasury now favors bills through 5y maturities to handle increased funding needs going forward. While the SOMA roll-off does not impact the deficit, it has an equivalent effect on Treasury supply. The possibility of increased deficits due to tax cuts provides a potential source of massive new Treasury supply, which we think is not priced into markets given the overall skepticism around the ability of Congress to pass any major new laws. If a new tax bill generates \$1.5 trillion of Treasury supply over the next 10 years, it's hard to see spreads anywhere along the curve widening, even if the supply is front-loaded.

The SOMA roll-off is deterministic: it will require \$840bn of increased Treasury issuance through 2021. As a result, the spread impact of the Fed runoff is almost entirely a

function of the uncertainty of where along the curve the new issuance will hit. A similar dynamic is at play with tax cuts. Because the budget resolution allows for \$1.5 trillion of new deficits over the next decade, the total supply impact is essentially known, but how it distributes over the curve, and how it distributes over the calendar years are major unknowns, in addition to whether or not it will materialize at all. While the Treasury refunding announcement, especially the TBAC (Treasury Borrowing Advisory Committee) analysis, skews the risks to larger 2y-5y issuance versus 10y-30y issuance if another \$1.5 trillion needs to be financed, we would expect all sectors to experience large increases in sizes, and this could ultimately be negative for spreads across the whole curve, which we think is the biggest threat to our 30y spread widening view. One mitigating factor in the tax reform scenario is the possible reduction in corporate debt issuance due to limitations on interest expense deduction. This should help the 2y-30y spread curve steepener even if 30y spreads were to tighten as it marginally reduces tightening pressure on 30y spreads from corporate supply swapping.

There are other reasons to like the 2y-30y spread curve steepener. Financial regulatory reform ([US Rates Watch: The next leg of regulatory reform 16 June 2017](#)) remains a potential source for 2y spread tightening and 30y spread widening, due to the potential for LCR requirements to ease (more supply of 2y-5y Treasuries) and for Treasuries to be removed from the SLR calculation (increased ability to finance cheap 30y Treasuries on asset-swap), and this story should develop in 2019. We expect Chair Powell to delegate financial reform tweaks to Governor Quarles, the new vice chair of supervision, who speaks for the first time as a Fed governor next week. Pension demand for long-end Treasuries has increased, and we expect this to be an ongoing positive for 30y spread wideners. Accounting changes ([Agency MBS Alert: Hedge accounting rule changes to have minimal impact on bank behavior 27 July 2017](#)) should also benefit 30y spread wideners because they could reduce the amount of receive-fixed flows from corporate debt swappers while also allowing corporate swappers to receive fixed in the shorter maturities. Also, the technical charts for 30y spreads are somewhat positive for 30y spread wideners. We continue to hold our 30y spread widener (currently -26bp, targeting 0bp [US Rates Alpha: Trade update: 5y point - Short and sweet 15 December 2016](#)) and our 2y spread short (vs OIS, currently -1bp, target +5bp, [US Rates Alpha: Trade idea: sell 2y spreads 27 September 2017](#)), and given the increasing risks around tax reform, we think the combination of these, i.e. the 2y-30y spread curve steepening position, may offer the best risk/reward outlook.

Spreads – EU

Sphia Salim
MLI (UK)
sphia.salim@baml.com

Erjon Satko
MLI (UK)
erjon.satko@baml.com

- We close our German 5y swap spread widener on the back of an anticipated shift in Q4 supply/demand and shift to a SSA front-end widener as a cheaper risk-off hedge

This is an excerpt from "[Liquid Insight: From swap spreads to EU supras](#)"

Supras: cheaper risk-off hedge than Bunds in Q4

We argued that holding A-AAA bonds denominated in EUR is our favorite long-term strategy to position for underpriced market risks. In fact, because of the scarcity of such high quality collateral in the EUR denominated market vs others, A-AAA EUR bonds benefit from outsized risk-off flows whenever risks re-emerge. As a result, long German bonds on ASW prove to be a more reliable hedge (details [here](#)). This said, we decided to close our [5y German spread widening recommendation](#) given an anticipated adverse shift in supply/demand as well as the absence of scheduled risk catalysts in Q4. However, the emergence of vol can surprise, especially when positioning is long risks.

This is why we now turn to short-dated EU supras, as we think (1) they provide for better historical entry levels vs swaps than German bonds, (2) they offer exposure to a richening of EUR high-quality assets/collateral, and (3) technical (QE-related) reasons can allow them to outperform govies in the near term. We explore this third point below.

Short term (QE-related) upside in front-end EU supras versus swaps

Some investors, like us, may have thought that the share of EU supras could be raised from the current 10% of PSPP (see [here](#)). However, the ECB made no change to the QE framework and Draghi did not really answer the questions regarding asset scarcity.

In fact, the only piece of information that was given, on the breakdown of QE, related to private-sector asset purchases (in corporate bonds, covered bonds and ABS), which the ECB said will remain sizeable. This in itself could explain the underperformance of EU supras. Indeed, the more purchases are done in private assets, the smaller the PSPP would be and, in turn, the smaller the supras purchases (at 10% of PSPP). More importantly, the lower the PSPP, the less likely it is the Bundesbank will need to conduct substitute purchases that would require the ECB to raise the target for EU Supras above 10% (Table 3). Overall, we think this now in the price.

At this stage, we see the potential for a positive surprise for EU supras (and outperformance vs Bunds) should the Bundesbank effectively starts using substitute purchases in November. This is information that we will get in theory on 4 December, when the November QE data is released, and ahead of the 14 December ECB meeting. *In theory, the QE framework stipulates that when a National Central Bank finds it will not be able to continue buying domestic bonds at the monthly rate implied by its capital key until the end of QE, it should use substitutes (EU supras) to recalibrate its domestic purchases. With the QE extension now confirmed, the Bundesbank may not wait until January to perform such recalibration if it finds there will be a need for it.*

As [discussed previously](#), this will very much depend on the amount of regional and agency bonds the Bundesbank believes it can source. We calculated that if (a) region and agencies only account for 25% of German purchases, and (b) private asset purchases are tapered in line with the rest of the program, the Bundesbank may require €1bn of monthly substitute purchases. If the "regions and agencies" percentage is lower, at 20%, then it would likely require around €1.5bn. In that case, the share of EU supras may have to be

raised to 13% of the PSPP, should the ECB not want to rely completely on higher private asset purchases (all scenarios in Table 3).

Table 3: Targeted monthly purchases of EU Supras in 2018 will depend on: (1) ECB's reliance on private sector bonds, (2) Buba's reliance on regions & agencies

Scenarios based on size of CSPP+ABSPP+CBPP3			Scenario of limited purchases in German regions & agencies -> Buba needs substitute purchases							
Scenario: share of CSPP+ABSPP+CBPP as % of total QE	Supras, if 10% of PSPP	BofA est. amount available for Buba to use as substitute (*)	Buba substitute needs, under 25% in regions & agcy	Need to raise share of Supras?	Resulting monthly Supras, bn	Implied % of PSPP	Buba substitute needs, under 20% in regions & agencies	Need to raise share of Supras?	Resulting monthly Supras, bn	Implied % of PSPP
15%	2.55	0.85	1.00**	YES	2.70	11%	1.50**	YES	3.20	13%
20%	2.40	0.8	0.65	No	2.40	10%	1.15	YES	2.75	11%
25%	2.25	0.75	0.30	No	2.25	10%	0.80	YES	2.30	10%
30%	2.10	0.7	0.00	No	2.10	10%	0.50	No	2.10	10%

Source: BofA Merrill Lynch Global Research

EU supras QE purchases sub -40bp Depo rate could be significant in November

QE flows can be particularly supportive for the front-end of EU supras curve over the coming weeks. Indeed, while purchases sub Depo have been authorized by the ECB since January, this has only been the case for jurisdictions/assets where those purchases were necessary, ie, where the stock of bonds trading above the Depo rate was not enough to fulfill QE purchases throughout the life of the program. We think this was not generally the case in EU supras until this last QE extension (see [SSA primer](#)).

Interestingly now, not only has the QE period been extended, but rates have rallied, taking a large portion of bonds sub -40bp. The consequence in our view is that November should see a large recalibration of the amount of sub Depo purchases authorized in EU supras. A lot of those may happen in the 1-2y bonds, as this will be the opportunity to buy before these bonds drop out of the QE eligible basket over the coming months.

The trade: Long ESM 2y (Oct19) vs swaps

We recommend buying ESM Oct19 versus swaps, at mid ASW of -34bp. We target -40bp, with a stop at -31bp. The trade should also benefit from lower EUR denominated ESM issuance and from the higher coupon payments in November.

The risk to the trade is a large Bund selloff that leads to an underperformance of AAA-AA bonds versus swaps. However, in this case, as in the June 2017 selloff, ESM is likely to fare much better than the OBL Oct19.

Technicals

Paul Ciana, CMT
MLPF&S
paul.ciana@baml.com

What will technically confirm a US bond market top?

- One of our [five monthly charts worth 1,000 words](#) is the front month continuous US 30 year treasury future (Chart 18). Price action rolled over in September and that could be the peak of a small right shoulder of a [head and shoulders top](#).
- [Trend exhaustion signals](#) at the peaks of the left shoulder (13), near the head (9) and right shoulder (13) compliment this view. Price and [RSI](#) bearishly diverged during 2015 and 2016. We also show the [MACD](#) has just crossed negative, which means the 12m SMA recently crossed below the 26m SMA. The signal line has yet to cross negative but is almost there.
- We estimate the neckline of the [head and shoulders](#) top pattern to be at 150 and a breakdown could lead to the next technical levels including the rising trend line, 100m SMA and maybe (eventually) the deeper trend line. We also show below that price has not closed below the 50m SMA since 2014. This month the 50m SMA is at 151-13. Ending November or December below these aforementioned levels would be a big bond market top and be bearish for bonds.

Chart 18: US 30y treasury future – monthly chart



Source: BofA Merrill Lynch Global Research, Bloomberg

Rates Alpha trade recommendations

Table 4: Global Rates Trade Book - open trades

	Open trades	Entry date	Entry level	Target	Stop	Latest level	Trade rationale/Time horizon	Risk
Europe	Short DBR Aug26 vs 1y1y at flat carry	02-Nov-17	21	35	14	21	We position for 10y Bund re-pricing higher following deteriorating demand, at flat carry / 3m	Markets increasing pricing of 2019 rate hikes / term premium not rising
	Long ESM 2y (Oct19) vs swaps	31-Oct-17	-34	-40	-31	-34	Cheap hedge to risk-off sentiment.	Bund selloff, underperformance of AAA-AA bonds versus swaps.
	3m 10s30s bear steepener	06-Oct-17	0k	400k	-200k	55k	Steepening on structural long-end paying / 3m	LDI receiving in long-end.
	Short OATei breakeven	21-Sep-17	192	165	208	194	B/E curve too steep and convexity attractive / 3m	Heavy 50y supply
	BTPei 2023-2026 real yield flattener	13-Sep-17	67	50	75	66	5y real rates too high. Italian index month end supportive / 3m	Heavy supply of the 2026 issue
	Long SPGBei 24 breakeven vs. 7y infl swap	16-Aug-17	34.1	15	45	24	Iota wide relative to ASW levels / 6m	Heavy SPGBei issuance
	Pay USD 5y5y vs EUR 5y5y	07-Aug-17	100	140	85	109	Macro and technical factors pushing for US-EU divergence	Further reduction in 10y equivalent purchases by the Bundesbank
	Long US-EZ 10y10y inflation spread	27-Jun-17	18.0	60.0	-5.0	20	Relative inflation pressures, roll-down / 6m	Upcoming EURI index events
	Short the belly of the 5s-10s-30s BTP fly	16-Jun-17	-35	-10	-50	-43	Carry efficient exposure to supportive long-end BTP supply/demand	Underperformance of wings / decrease in BTP yields.
	Short belly of OATei 2022-24-27 barbell	12-Jun-17	16.1	8.0	20.0	13	Cheap RV and favourable index extension /1m	Concentration of supply in the 10y
	Pay Jan18 ECB	26-May-17	-33.2	-21.5	-36.5	-35.5	Attractive risk-reward as market is underpricing the probability of a technical hike over next year	A more dovish than expected ECB is the main risk
	SPGBei 2019-21-24 barbell	12-May-17	53.5	33	65	43	RV cheapening of 2024 after 10y sale	More 2024 switches into new 10y
	DBRi 2020/2030 real curve flattener	13-Mar-17	85.1	50.1	105.1	88	April reinvestment and rebalancing flows/6m	Richening of short-dated Germany
	Buy 50y BTPs vs 30y BTPS	16-Nov-16	30	-8	55	25	50y is not eligible for QE, and term premia in the 2-31y sector would increase if QE was to end/6m	Risk is ECB QE continues and peripheral risk premium stays low.
UK	5y fwd 2s10s inflation flattener	07-Sep-16	38	18	48	34	Forward inflation curve too steep in swaps/6m	Sharp appreciation in the EUR
	Pay 5y5y EUR 3s6s basis	10-Aug-16	11.3	13.3	10.3	11.2	Sizable corp issuance to support wider basis /6m.	corporate issuance underwhelms
	10s50s real yield curve flattener	12-Oct-17	17.2	0	25	22.5	Upcoming BoE reinvestments and Nov extensions	Continued upside surprises to RPI
	Short UKT 2.27% '24 vs. UKT 0.75% '23	21-Jul-17	1.1	7	-3	2.9	RV opportunity / 3m	24s sees strong demand in the BoE
	2y1y vs 10y10y basis steepener	13-Jun-17	-8.5	12	-19	-1.2	Benchmark migration flows supportive /6m	No change of benchmark to Sonia
	Short UKT 3.75% 2020 vs. OIS	24-Mar-17	-26.4	0	-40	-27.3	Carry positive Brexit hedge/ 6m	Short-dated cash richens further
	Long UKT 2068 v short 10y20y swap	08-Dec-16	16.1	-30	40	-7.0	Demand & supply dynamics show continued demand for ultra-long end cash/6m	Long swaps continue to outperform
	GBP 2s10s 2y fwd inflation steepener	12-Aug-16	3	23	-10	-9	Currency pass-through to inflation subsidies /6m	Sharp further fall in £
	UKTI 2050/55 flattener	12-Aug-16	1.3	-4	3.5	0	Acquire cheap convexity/3m	Weak uptake of super-long supply
	Long RPI 3y 3.5% ZC inflation cap	21-Oct-15	26	-	-	9	£ weakness to lift inflation post-Brexit /6m	£ strength, severe recession
US	Sell 2y cash Treasuries vs. OIS	27-Sep-17	-3.5	5	-8	-1.5	Reversal in reserve manager demand and higher auction sizes should help cash underperform OIS	Foreign selling does not materialize and tax reform disappoints
	6m 2s5s conditional bull steepener	21-Sep-17	0k	+400k	-200k	-25k	Post Sept FOMC, 2s5s now has room to bull steepen if rates were to decline.	Disappointment in tax reform
	Long 5y breakeven	02-Aug-17	1.68%	2%	1.5%	1.80%	Moves higher in rates would be led by breakevens as the Fed is less inclined to hike rates soon.	Significant risk assets correction.
	5s30s Libor/Funds basis flattener	27-Jul-17	10	0	15	11	Moving to fixed spread Libor option would imply a flat term structure of the Libor/Funds basis curve	Wary migration of the receive libor flow in the long end to receive OIS.
	2y 3s7s bear steepener	20-Jul-17	-5k	250k	-125k	-90k	A shift higher in terminal rate as peak pessimism fades should steepen the curve / 6m	Significant shock lower to terminal rate or slowdown of hikes
	6m5y payer ladder	12-Jul-17	-100k	700k	-100k	+156k	We see a transition from a CTA-led move to a slow drag higher in yields / 6m	A continued sharp rise in rates in the near term
	Long 3y 5s30s bear steepener & 1y2y payer	25-Apr-17	0	2mn	-900k	+450k	Steeperners + front end shorts for deficit expansion	Significant bear flattening
	Sell 2s-3s-5s swap butterfly	01-Mar-17	-6	5	-12	-3	3y point is most vulnerable in a bearish move /6m	Dramatic slowdown in tax reform
	Buy 30y treasuries vs matched Libor swap	16-Nov-16	-56	0	-75	-26.5	De-regulation may contribute driving swapsreads back to pre-crisis levels /12m	The main risk is that policy changes retain strict capital requirements
	Long US\$100mn 2y1y payer, 2.50%	16-Nov-16	17	48	0	4.5	We see room for the belly of the curve to reprice to the dots. Vol in 2y1y could also richen /6m	Reversal of the recent selloff on disappointment re fiscal easing
Asiapac	TCV Nov-26 vs. WATC Jul-25	17-Oct-17	10	25	2	7	Relative supply dynamics between the two states/6m	Earlier than expected boost to GST revenues/6m
	NZ 1y vs. 5y swap steepener	19-Oct-17	68	95	54	60	Inflation profile and RBNZ policy response/6m	Shift to a tightening bias from the RBNZ/6m
	QTC Jun-21 vs. ACGB Nov-27	29-Sep-17	43	60	30	43	RBA on hold and ACGB supply on longer-end/3m	Policy outlook change or risk-off event impacting credit spreads/3m
	AUD OIS 5m vs. 12m steepener	11-Jul-17	6	25	2	6	Steady RBA this year and tighter policy expectations next year/6m	Earlier than expected shift in policy guidance this year/6m

Source: BofA Merrill Lynch Global Research. Bid/offer spreads are not accounted for in initiation and closing levels. Does not reflect tax withholdings or any investment advisory fees. Past performance is no guarantee of future results. A complete performance record is available on request. Trade initiation and termination prices are determined at the time we publish the initiation and termination of the trade. Prices used to mark current levels of open trades in our model portfolio are taken at the time the day prior to the publication of the Global Rates and FX Weekly. Trade levels are expressed in basis points when not specified in the table

Table 5: Global Rates Trade Book - closed trades

	Closed trades	Entry date	Entry level	Target	Stop	Close date	Level closed
Eurozone	2y5y payer ladder ATM/ATM+25/ATM+50	28-Jul-17	-200k	200k	-400k	01-Nov-17	60k
	5y swap spread widener	02-Aug-17	49	60	43	31-Oct-17	54
	Long 10y France vs Spain	09-Feb-17	63	120	30	05-Oct-17	81
	Rec 3m Dec18, pay 12m Jun20 (Eonia)	25-Aug-17	39	50	33	25-Sep-17	44
	Dec18-Jun20 steepener	25-Aug-17	32	42	27	25-Sep-17	39
	1y1y vs 10y10y basis steepener	13-Jun-17	-7	1	-10.5	12-Sep-17	-1.9
	Long 3m2y ATM payer	12-May-17	87K	180K	0	10-Aug-17	Expired
	Long Mar19 Euribors	19-Jul-17	100.035	100.135	99.985	08-Aug-17	100.105
	10y German ASW widener	29-Jun-17	42	56	35	02-Aug-17	47
	Long Sep18 BKO vs Jul18 DBR	05-Jul-17	3	-2	6	17-Jul-17	-2
	4m10y 50-wide strangle	16-Mar-17	500K	1.5mln	0	14-Jul-17	Expired
	Long 3m30y vol vs 3m10y (values in ratios)	06-Apr-17	1.14	1.25	1.09	06-Jul-17	Expired
	Receive 4s on the 2s4s7s PCA-weighted fly	16-Mar-17	-12.9	-14.3	-12.1	05-Jul-17	-15.1
	Sell 10y20y EUR inflation	05-Jan-17	217	170	240	28-Jun-17	202
	Long 5y Dutch CDS	09-Feb-17	25	50	15	01-Jun-17	21
	Pay Sep17 Eonia	12-May-17	-35.2	-31.5	-37	25-May-17	-35
	Short Dec18 Euribor	07-Apr-17	100.13	100.01	100.19	25-May-17	100.11
	6m10y payer spread & receiver	09-Feb-17	670K	1200K	350K	11-May-17	350K
	Long 5y Germany against 1y1y swaps	16-Mar-17	23	43	13	25-Apr-17	19
	Long 10y BTP future vs short 2y BTP future, delta neutral	16-Mar-17	200	100	250	25-Apr-17	181
	Long OATei 47 B/E vs 30y EUR inflation	10-Feb-17	25	-5	40	25-Apr-17	25
	Long 5y5y French inflation vs Euro inflation	10-Feb-17	11.8	30	0	25-Apr-17	17.3
	3m fwd 2s5s10s receiver fly (ATM)	12-Jan-17	0	200	-100	13-Apr-17	-75
	Receiving the 3m EUR basis	14-Feb-17	-27.5	-60	-10	04-Apr17	-16
	6m30y ATM+25/ATM+50 payer spread	19-Jan-17	1.25mn	2.25mn	750K	14-Mar-17	1.34mn
	Long the Apr21 PGB vs May21 BTP	10-Nov-16	132	86	155	02-Feb-17	125
	30y/50y BTP flattener	06-Oct-16	48	25	60	02-Feb-17	25
	Short 3m5y ATM+25 payer	08-Dec-16	-200K	0	-300K	18-Jan-17	-25K
	Long 3m7y EUR vs USD OTM receiver	13-Oct-16	OK	500K	-250K	13-Jan-17	OK
	Short OATei 2047 v OAT 2066	13-Oct-16	163	130	190	05-Jan-17	190
	Receive 2y1y Eonia vs 2y1y USD OIS	23-Nov-16	170	220	145	05-Jan-17	191
	Mar17 FRA-OIS widener	21-Sep-16	6.25	10	4	05-Jan-17	3.5
	Long ATM 5y10y payer in USD vs OTM 5y10y EUR payer	04-Dec-15	OK	-	-	16-Dec-16	2500K
	Sell German 2y vs OIS, buy 10y vs OIS	16-Nov-16	-17	14	-34	08-Dec-16	-28
	Short 1x2 1y2y EUR receiver spread	03-Dec-15	0	-	-	05-Dec-16	-200K
	Long 3m30y payer spread	10-Nov-16	900K	1700K	-500K	2-Dec-16	1700K
	OATei 2022/24/27 short fly	18-Feb-16	10.3	5	15	1-Dec-16	10
	BTPei 2026/32/41 short fly	13-Apr-16	19.5	7	26	1-Dec-16	23.9
	Buy April 2020 BTP Italia	15-Jun-16	23.6	-0.4	34.6	1-Dec-16	34.6
	Long Apr21 PGB vs Apr21 OBL#173	21-Oct-16	233	190	255	10-Nov-16	229
	Long 3m10y EUR ATM payer vs one in close to ATM in USD	14-Oct-16	OK	800K	-400K	10-Nov-16	-400K
	Long 6m10y payer spread	23-Aug-16	3.5	-	-	10-Nov-16	11
	Long 6m30y payer ladders	20-Jul-16	3.3	-	-	10-Nov-16	8
	Germany 10s30s flattener	10-Mar-16	76.3	-	-	10-Nov-16	70
	Long BTP Sep19 vs OBL Oct19	26-Oct-16	73	63	78	31-Oct-16	78
	Short Schatz ASW	15-Jul-16	41	34	45	22-Sep-16	42
	Short Feb19 OBL #168 vs. matched maturity	15-Jul-16	-21	-14	-25	22-Sep-16	-25
	Long 1y4y EUR inflation	12-Jul-16	65	90	50	22-Sep-16	88.1
	Long OATi 2025 on ASW	16-May-16	10.8	-5	19	22-Sep-16	-0.5
	Buy Aug RXU6 call @ 167 and put @ 162	16-Jun-16	1.18	-	-	22-Jul-16	0
	OATei 2018/2027 flattener	11-Mar-16	78.5	40	100	12-Jul-16	55
	Ireland 5s10s flattener	28-Apr-16	95	75	105	28-Jun-16	75
	Long 5y Italy vs Spain	27-Apr-16	-0.6	11	-7	27-Jun-16	-5
	Buy Aug call on RXU6 @ 164	27-Apr-16	0.45	2.21	0	16-Jun-16	2.21
	Short 3y ASW	28-Jan-16	-32	-10	-42	10-Jun-16	-36
	Long German 10y on ASW	23-Jan-15	-31	-45	-24	08-Jun-16	-45
	6s30s breakeven flattener	18-Jan-16	96	70	110	06-Jun-16	70
	6m30y EUR payer spreads ATM/ATM+25bp	04-Dec-15	1200K	-	-	04-Jun-16	Ok
	Long 2y inflation in EU vs US	23-Mar-15	80	20	115	16-May-16	115
	Long Spain 1y2y vs Germany	02-Mar-16	80	60	95	27-Apr-16	73
	5y5y US-EZ inflation swap widener	14-Oct-15	47	75	32	03-Mar-16	58
	Long TII 2040 vs short OATei 2040	26-Sep-15	4	40	-15	03-Mar-16	19
	Long Spain 1y2y	19-Feb-16	46	25	60	02-Mar-16	27

UK	Short 4y fwd 15y ASW	04-Dec-15	51	25	63	02-Mar-16	63
	Short 30y breakevens	16-Nov-15	338	315	350	02-Mar-16	315
	Long Italy 5y CDS basis	23-Nov-15	60	86	-	10-Feb-16	89
	5s50s real yield curve flattener	12-Jul-17	80.3	45	98	12-Oct-17	62
	Dec17 – Dec18 MPC-dated OIS flattener	22-Sep-17	33.5	12	39	3-Nov-17	26.5
	Pay fwd yield UKT5% 18 & UKT3.75% 20	06-Apr-17	20.8	45	8	14-Sep-17	43
	Long UKT 4.5% 2034	25-Aug-17	1.54	1.35	1.65	08-Sep-17	1.46
	Pay 10y5y GBP vs. EUR	09-Feb-17	-2	60	-30	08-Sep-17	-30
	Long UKT 5% 2025 v 2.25% 2023 on ASW	14-Dec-16	11	-1	17	14-Jul-17	5.6
	Short UKTI 2050 v UKT 2068	14-Feb-17	340	300	360	12-Jul-17	315.4
	Pay 5y UK real swap rate	07-Oct-16	-274	-235	-290	29-Jun-17	249
	Short UKT 4 2022 vs. OIS	02-Mar-17	-6	12	-15	23-Mar-17	-15
	Short breakevens UKT2024 vs UKT12024	18-Nov-16	311	260	335	10-Mar-17	300
	Pay 2y3y real swap rate in UK vs. US	07-Sep-16	220	160	250	16-Feb-17	250
	UK 5s10s ASW flattener (I-Spread)	28-Oct-16	20	6	27	05-Dec-16	27
	UKTI 2019/22/27 short fly	12-Aug-16	21.5	8	28	1-Dec-16	10
	2022/2039 Gilt flattener	29-Sep-16	117.3	90	130	28-Oct-16	117.6
	Long UKT 4.25% 2039 on ASW	02-Sep-16	47.2	25	60	28-Oct-16	54.2
	Pay 2y3y real swap rate in UK	16-Sep-16	-243	-185	-275	06-Oct-16	-275
	Long UKTI 2019 breakeven	29-Jun-16	243.7	290	220	06-Oct-16	289
	Long UKT 2023 vs. 2025	21-Jul-16	12.8	20	8	02-Sep-16	16.7
	Long UKT 2046 vs 2045 & 2049	21-Jul-16	5.5	-5	8	02-Sep-16	3.8
	Buy LU6 99.75 call option, sell 99.125 put	27-Apr-16	1tick	-	-	18-Aug-16	1.5 ticks
	UKT 5s20s flattener	27-May-16	128	100	145	11-Aug-16	100
	Short UKT 2060 vs OAT 2060	29-Mar-16	-51	-100	-20	11-Aug-16	-3
	Receive July MPC OIS	22-Jun-16	42	-	-	14-Jul-16	46
	6m fwd 2s5s GBP swap steepener	09-Jun-16	22	40	15	27-Jun-16	15
	Short UK 10y10y inflation vs US	26-Sep-15	172	140	190	17-May-16	140
	Pay 10y fwd 20y UK real yield vs. US	26-Sep-15	238	175	270	17-May-16	196
US	Buy CAN 2y note vs US 2y note	19-Sep-17	16	0	24	16-Oct-17	-3
	Short 10y TIPS	16-Nov-16	35	100	0	02-Aug-17	48
	Pay 10y inflation swap	06-Sep-16	-28	40	-50	02-Aug-17	8
	Buy 98.625 puts on EDM7	01-Mar-17	4.5	15	0	01-Jun-17	0.3
	Receive May FOMC OIS at 87bp	01-Mar-17	87	81	91	3-May-17	90
	US 6m5y ATM/ATM-40bp receiver spread	10-Apr-17	640K	890K	490K	13-Apr-17	890K
	US 1y5y ATM+25bp payer	10-Apr-17	875K	1375K	625K	18-Apr-17	625K
	Pay Mar FOMC OIS at 71.5 and receive May FOMC OIS at 81	22-Feb-17	9.5	1	15	01-Mar-17	3.2
	2y Swap spread tightener	02-Feb-17	29.5	20	35	17-Feb-17	35
	Sell 6m 2s5s10s receiver fly	19-Aug-16	OK	600K	-350K	15-Feb-17	0
	Long US\$100mn 3m5y payer, struck at 2.05%	16-Nov-16	7	22	0	15-Feb-17	2.9
	5s10s real yield curve steepener	07-Sep-16	22.8	70	10	02-Feb-17	60.4
	Long USCPI 1y 2% inflation cap	23-Feb-16	6	-	-	17-Jan-17	0
	Long payer 2y5y vs 3m5y	23-Sep-16	840K	1340K	640K	28-Dec-16	640K
	Buy RRB 2031	15-Jun-16	12.5	-20	30	16-Dec-16	30
	3m 5s30s bear flattener	20-Oct-16	OK	500K	-250K	15-Dec-16	871K
	Sell 2s-5s-10s swap fly (short 5y)	06-Sep-16	-8.5	10	-17	15-Dec-16	20
	3y fwd 2s10s swap flattener	18-May-16	51	25	65	15-Dec-16	23
	Long ACGB 5y breakeven	13-Mar-17	171	195	155	25-Oct-17	168
Asiapac	QTC Jun-21 vs. ACGB Apr-26	23-Jan-17	23	45	12	29-Sep-17	34
	Receive Feb18-OIS/3y/10y swaps butterfly	11-Jul-17	-12	-20	-6	18-Sep-17	-5
	NZ 1y vs. 5y swap steepener	30-Jan-17	92	130	72	18-May-17	72
	EuroDollar Mar18 vs. BAB Dec17 spread	24-Nov-16	44	15	24	10-Apr-17	15
	AU 2y2y vs. US 2y2y forward swap spread	24-Nov-16	36	10	60	05-Apr-17	18
	May-21 ACGB vs. paid 10y swap	19-Sep-16	51	80	35	10-Nov-16	80
	AU NZ 2y swap spread (s/q vs s/s)	02-Aug-16	36	20	46	4-Nov-16	44
	Long NSWTC IX 2020 breakeven	21-Jun-16	106	140	85	01-Sep-16	104
	KfW19s versus NSWTC19s	07-Dec-15	42	28	-	01-Sep-16	32
	AU NZ 2y swap spread (S/Q vs S/S basis)	24-May-16	48	20	62	08-Jul-16	49
	ACGB breakeven 2018	15-Mar-16	1.58%	2.20%	-	21-Jun-16	1%
	Jun 16 - Jun 17 BAB spread	07-Dec-15	6	20	-	09-Jun-16	-25
	Nov-2020 ACGB	21-Mar-16	2.13%	1.19%	2.25%	06-May-16	1.19%
	2Y1Y forward swap	21-Mar-16	2.23%	1.90%	2.35%	06-May-16	1.85%
	AU breakeven 2020 versus 2018	07-Dec-15	9	20	5	15-Mar-16	17
	AU Itraxx vs Asia Ex-Japan Itraxx	23-Nov-15	7	25	0	26-Feb-16	0
	Paid AU 5y5y versus Rec CA 5y5y	23-Nov-15	91	120	75	26-Feb-16	101
	AU 3y10y conditional steepener 6mth fwd atm+25 4:1 zero cost	24-Aug-15	86.75	-	-	24-Feb-16	0
	3y2y swap	07-Dec-15	2.97%	2.80%	-	08-Jan-16	2.72%
	QTC Feb-20	07-Dec-15	2.67%	2.50%	-	08-Jan-16	2.40%

Note: Bid/offer spreads not accounted for in entry and closing levels. Does not reflect tax, withholdings or any investment advisory fees. Past performance is no guarantee of future results.

A complete performance record is available on request. Inception date – 31-Jul-14. For additional discussion on baseline views, valuation and risks to closed trades, please see links to the relevant reports.

Trade recommendations are highlighted green when the closing value is greater than the entry value and red when the closing value is less than or equal to the entry value. Source: BofA Merrill Lynch Global Research

Global rates forecasts

Table 6: Quarter-end bond yield forecasts

		<i>Latest</i>	<i>4Q17</i>	<i>1Q18</i>	<i>2Q18</i>	<i>3Q18</i>
USA	3m Libor	1.38	1.60	1.85	2.10	2.40
	2y T-Note	1.61	1.60	1.75	1.90	2.05
	5y T-Note	2.00	2.15	2.25	2.35	2.45
	10y T-Note	2.35	2.85	2.85	2.85	2.85
	30y T-Bond	2.83	3.15	3.25	3.25	3.25
	2y Swap	1.83	1.80	1.92	2.05	2.20
	5y Swap	2.09	2.20	2.28	2.38	2.45
	10y Swap	2.35	2.85	2.88	2.90	2.90
Germany	3m Euribor	-0.33	-0.33	-0.33	-0.32	-0.30
	2y BKO	-0.75	-0.70	-0.68	-0.64	-0.60
	5y OBL	-0.35	-0.20	-0.15	-0.10	0.00
	10y DBR	0.37	0.55	0.60	0.65	0.70
	30y DBR	1.25	1.35	1.40	1.45	1.50
	2y Swap	-0.20	-0.18	-0.18	-0.17	-0.15
	5y Swap	0.20	0.26	0.31	0.33	0.35
	10y Swap	0.84	0.97	1.00	1.02	1.05
Japan	3m Libor	-0.04	0.00	0.00	0.00	0.00
	2y JGB	-0.16	-0.12	-0.10	-0.10	-0.10
	5y JGB	-0.10	-0.05	-0.05	-0.05	-0.05
	10y JGB	0.06	0.07	0.08	0.08	0.10
	2y Swap	0.03	0.05	0.07	0.07	0.07
	5y Swap	0.09	0.10	0.10	0.10	0.10
	10y Swap	0.25	0.29	0.30	0.30	0.32
U.K.	3m Libor	0.44	0.60	0.60	0.60	0.60
	2y UKT	0.41	0.45	0.40	0.40	0.40
	5y UKT	0.71	0.90	1.00	1.15	1.25
	10y UKT	1.27	1.50	1.60	1.80	2.00
	30y UKT	1.85	1.90	2.00	2.10	2.20
	2y Swap	0.81	0.80	0.75	0.75	0.75
	5y Swap	1.05	1.10	1.15	1.30	1.40
	10y Swap	1.33	1.45	1.60	1.80	2.00
Australia	3m BBSW	1.70	1.70	1.80	1.90	2.00
	2y ACGB	1.82	2.00	2.10	2.20	2.30
	5y ACGB	2.18	2.40	2.50	2.60	2.65
	10y ACGB	2.65	3.00	3.10	3.20	3.25
	3y Swap	2.20	2.20	2.30	2.40	2.50
	10y Swap	2.82	3.15	3.25	3.35	3.45
Canada	2y Govt	1.41	1.35	1.50	1.65	1.65
	5y Govt	1.64	1.80	1.85	1.95	2.00
	10y Govt	1.96	2.15	2.25	2.25	2.25
	2y Swap	1.77	1.70	1.85	2.00	2.00
	5y Swap	2.02	2.16	2.21	2.31	2.36
	10y Swap	2.28	2.41	2.51	2.51	2.51

Source: BofA Merrill Lynch Global Research

Options Risk Statement

Potential Risk at Expiry & Options Limited Duration Risk

Unlike owning or shorting a stock, employing any listed options strategy is by definition governed by a finite duration. The most severe risks associated with general options trading are total loss of capital invested and delivery/assignment risk... all of which can occur in a short period.

Investor suitability

The use of standardized options and other related derivatives instruments are considered unsuitable for many investors. Investors considering such strategies are encouraged to become familiar with the "Characteristics and Risks of Standardized Options" (an OCC authored white paper on options risks). U.S. investors should consult with a FINRA Registered Options Principal.

For detailed information regarding the risks involved with investing in listed options:

<http://www.theocc.com/about/publications/character-risks.jsp>

Analyst Certification

We, Mark Cabana, CFA, Mark Capleton, Paul Ciana, CMT, Ralf Preusser, CFA, Ralph Axel, Sebastien Cross, Shyam S.Rajan, Sphia Salim and Tony Morriss, hereby certify that the views each of us has expressed in this research report accurately reflect each of our respective personal views about the subject securities and issuers. We also certify that no part of our respective compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

Disclosures

Important Disclosures

BofA Merrill Lynch Credit Opinion Key

BofA Merrill Lynch Global Research provides recommendations on an issuer's bonds (including corporate and sovereign external debt securities), capital securities, equity preferreds and CDS as described below. Convertible securities are not rated. An issuer level recommendation may also be provided for an issuer as explained below. BofA Merrill Lynch Global Research credit recommendations are assigned using a three-month time horizon.

Issuer Recommendations: If an issuer credit recommendation is provided, it is applicable to bonds and capital securities of the issuer except bonds and capital securities specifically referenced in the report with a different credit recommendation. Where there is no issuer credit recommendation, only individual bonds and capital securities with specific recommendations are covered. CDS and equity preferreds are rated separately and issuer recommendations do not apply to them.

BofA Merrill Lynch Global Research credit recommendations are assigned using a three-month time horizon:

Overweight: Spreads and /or excess returns are likely to outperform the relevant and comparable market over the next three months.

Marketweight: Spreads and/or excess returns are likely to perform in-line with the relevant and comparable market over the next three months.

Underweight: Spreads and/or excess returns are likely to underperform the relevant and comparable market over the next three months.

BofA Merrill Lynch Global Research uses the following rating system with respect to **Credit Default Swaps (CDS)**:

Buy Protection: Buy CDS, therefore going short credit risk.

Neutral: No purchase or sale of CDS is recommended.

Sell Protection: Sell CDS, therefore going long credit risk.

Credit Opinion History Tables for the securities referenced in this research report are available at <http://pricecharts.baml.com>, or call 1-800-MERRILL to have them mailed.

MLPF&S or an affiliate was a manager of a public offering of securities of this issuer within the last 12 months: France, Italy, Queensland, UK.

The issuer is or was, within the last 12 months, an investment banking client of MLPF&S and/or one or more of its affiliates: Australia, France, Germany, Italy, Japan, Queensland, Spain, Treas Corp Victoria, UK.

MLPF&S or an affiliate has received compensation from the issuer for non-investment banking services or products within the past 12 months: Australia, France, Germany, Italy, Japan, New Zealand, Queensland, Spain, Treas Corp Victoria, UK, West Australia Treas.

The issuer is or was, within the last 12 months, a non-securities business client of MLPF&S and/or one or more of its affiliates: Australia, France, Germany, Italy, Japan, New Zealand, Queensland, Spain, Treas Corp Victoria, UK, West Australia Treas.

MLPF&S or an affiliate has received compensation for investment banking services from this issuer within the past 12 months: Australia, France, Germany, Italy, Japan, Queensland, UK.

MLPF&S or an affiliate expects to receive or intends to seek compensation for investment banking services from this issuer or an affiliate of the issuer within the next three months: Australia, France, Germany, Italy, Japan, Queensland, Spain, Treas Corp Victoria, UK.

MLPF&S or one of its affiliates has a significant financial interest in the fixed income instruments of the issuer. If this report was issued on or after the 15th day of the month, it reflects a significant financial interest on the last day of the previous month. Reports issued before the 15th day of the month reflect a significant financial interest at the end of the second month preceding the report: Spain.

MLPF&S or one of its affiliates trades or may trade as principal in the debt securities (or in related derivatives) that are the subject of this research report: Australia, France, Germany, Italy, Japan, New Zealand, Queensland, Spain, Treas Corp Victoria, UK, West Australia Treas.

The issuer is or was, within the last 12 months, a securities business client (non-investment banking) of MLPF&S and/or one or more of its affiliates: Australia, France, Germany, Italy, Japan, New Zealand, Queensland, Spain, Treas Corp Victoria, UK, West Australia Treas.

BofA Merrill Lynch Research Personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

BofA Merrill Lynch Global Credit Research analysts regularly interact with sales and trading desk personnel in connection with their research, including to ascertain pricing and liquidity in the fixed income markets.

Other Important Disclosures

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for the purpose of any recommendation in relation to: (i) an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report; or (ii) a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including Bank of America Merrill Lynch trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

This report may refer to fixed income securities that may not be offered or sold in one or more states or jurisdictions. Readers of this report are advised that any discussion, recommendation or other mention of such securities is not a solicitation or offer to transact in such securities. Investors should contact their BofA Merrill Lynch representative or Merrill Lynch Financial Global Wealth Management financial advisor for information relating to fixed income securities.

Rule 144A securities may be offered or sold only to persons in the U.S. who are Qualified Institutional Buyers within the meaning of Rule 144A under the Securities Act of 1933, as amended. SECURITIES DISCUSSED HEREIN MAY BE RATED BELOW INVESTMENT GRADE AND SHOULD THEREFORE ONLY BE CONSIDERED FOR INCLUSION IN ACCOUNTS QUALIFIED FOR SPECULATIVE INVESTMENT.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

The securities discussed in this report may be traded over-the-counter. Retail sales and/or distribution of this report may be made only in states where these securities are exempt from registration or have been qualified for sale.

Futures and options are not appropriate for all investors. Such financial instruments may expire worthless. Before investing in futures or options, clients must receive the appropriate risk disclosure documents. Investment strategies explained in this report may not be appropriate at all times. Costs of such strategies do not include commission or margin expenses.

Officers of MLPF&S or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

This report, and the securities discussed herein, may not be eligible for distribution or sale in all countries or to certain categories of investors.

BofA Merrill Lynch Global Research policies relating to conflicts of interest are described at <http://go.bofa.com/coi>.

"BofA Merrill Lynch" includes Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") and its affiliates. Investors should contact their BofA Merrill Lynch representative or Merrill Lynch Global Wealth Management financial advisor if they have questions concerning this report. "BofA Merrill Lynch" and "Merrill Lynch" are each global brands for BofA Merrill Lynch Global Research.

Information relating to Non-US affiliates of BofA Merrill Lynch and Distribution of Affiliate Research Reports:

MLPF&S distributes, or may in the future distribute, research reports of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSF); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Investment Industry Regulatory Organization of Canada; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; Merrill Lynch (Japan): Merrill Lynch Japan Securities Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International Incorporated (Seoul Branch) regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; DSP Merrill Lynch (India): DSP Merrill Lynch Limited, regulated by the Securities and Exchange Board of India; Merrill Lynch (Indonesia): PT Merrill Lynch Sekuritas Indonesia, regulated by Otoritas Jasa Keuangan (OJK); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (Russia): OOO Merrill Lynch Securities, Moscow, regulated by the Central Bank of the Russian Federation; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Spain): Merrill Lynch Capital Markets Espana, S.A.S.V., regulated by Comisión Nacional del Mercado De Valores; Merrill Lynch (Brazil): Bank of America Merrill Lynch Banco Multiplo S.A., regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company, Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This research report: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK) and Bank of America Merrill Lynch International Limited, which are authorized by the PRA and regulated by the FCA and the PRA, and is distributed in the UK to retail clients (as defined in the rules of the FCA and the PRA) by Merrill Lynch International Bank Limited, London Branch, which is authorized by the Central Bank of Ireland and subject to limited regulation by the FCA and PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been considered and distributed in Japan by Merrill Lynch (Japan), a registered securities dealer under the Financial Instruments and Exchange Act in Japan; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSF; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by DSP Merrill Lynch (India); and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch International Bank Limited (Merchant Bank) (MLIBLMB) and Merrill Lynch (Singapore) (Company Registration Nos F 06872E and 198602883D respectively). MLIBLMB and Merrill Lynch (Singapore) are regulated by MAS. Bank of America N.A., Australian Branch (ARBN 064 874 531), AFS License 412901 (BANA Australia) and Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distribute this report in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of BANA Australia, neither MLEA nor any of its affiliates involved in preparing this research report is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this report in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Research reports prepared and issued by Merrill Lynch (DIFC) are done so in accordance with the requirements of the DFSA conduct of business rules. Bank of America Merrill Lynch International Limited, Frankfurt Branch (BAMLI Frankfurt) distributes this report in Germany and is regulated by BaFin.

This research report has been prepared and issued by MLPF&S and/or one or more of its non-US affiliates. MLPF&S is the distributor of this research report in the US and accepts full responsibility for research reports of its non-US affiliates distributed to MLPF&S clients in the US. Any US person receiving this research report and wishing to effect any transaction in any security discussed in the report should do so through MLPF&S and not such foreign affiliates. Hong Kong recipients of this research report should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this report. Singapore recipients of this research report should contact Merrill Lynch International Bank Limited (Merchant Bank) and/or Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this research report.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Merrill Lynch. This research report provides general information only, and has been prepared for, and is intended for general distribution to, BofA Merrill Lynch clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This report is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This report and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this report and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this report.

Securities and other financial instruments discussed in this report, or recommended, offered or sold by Merrill Lynch, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

Futures and options are not appropriate for all investors. Such financial instruments may expire worthless. Before investing in futures or options, clients must receive the appropriate risk disclosure documents. Investment strategies explained in this report may not be appropriate at all times. Costs of such strategies do not include commission or margin expenses.

BofA Merrill Lynch is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

This report may contain a trading idea or recommendation which highlights a specific identified near-term catalyst or event impacting a security, issuer, industry sector or the market generally that presents a transaction opportunity, but does not have any impact on the analyst's particular "Overweight" or "Underweight" rating (which is based on a three month trade horizon). Trading ideas and recommendations may differ directionally from the analyst's rating on a security or issuer because they reflect the impact of a near-term catalyst or event.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned in this report. Investors in such securities and instruments effectively assume currency risk.

UK Readers: The protections provided by the U.K. regulatory regime, including the Financial Services Scheme, do not apply in general to business coordinated by BofA Merrill Lynch entities located outside of the United Kingdom. BofA Merrill Lynch Global Research policies relating to conflicts of interest are described at <http://go.bofa.com/coi>.

MLPF&S or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. MLPF&S or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Merrill Lynch, through business units other than BofA Merrill Lynch Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented in this report. Such ideas or recommendations reflect the different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Merrill Lynch is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this report.

In the event that the recipient received this report pursuant to a contract between the recipient and MLPF&S for the provision of research services for a separate fee, and in connection therewith MLPF&S may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom MLPF&S has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by MLPF&S). If such recipient uses the services of MLPF&S in connection with the sale or purchase of a security referred to herein, MLPF&S may act as principal for its own account or as agent for another person. MLPF&S is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities mentioned in this report.

Copyright and General Information regarding Research Reports:

Copyright 2017 Bank of America Corporation. All rights reserved. This research report is prepared for the use of BofA Merrill Lynch clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Merrill Lynch. BofA Merrill Lynch research reports are distributed simultaneously to internal and client websites and other portals by BofA Merrill Lynch and are not publicly-available materials. Any unauthorized use or disclosure is prohibited. Receipt and review of this research report constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained in this report (including any investment recommendations, estimates or price targets) without first obtaining expressed permission from an authorized officer of BofA Merrill Lynch.

Materials prepared by BofA Merrill Lynch Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Merrill Lynch, including investment banking personnel. BofA Merrill Lynch has established information barriers between BofA Merrill Lynch Global Research and certain business groups. As a result, BofA Merrill Lynch does not disclose certain client relationships with, or compensation received from, such issuers in research reports. To the extent this report discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this report. BofA Merrill Lynch Global Research personnel's knowledge of legal proceedings in which any BofA Merrill Lynch entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this report is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Merrill Lynch in connection with the legal proceedings or matters relevant to such proceedings.

This report has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of MLPF&S, any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Merrill Lynch Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Merrill Lynch and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This report may contain links to third-party websites. BofA Merrill Lynch is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this report and is not incorporated by reference into this report. The inclusion of a link in this report does not imply any endorsement by or any affiliation with BofA Merrill Lynch. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Merrill Lynch is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of the report and are subject to change without notice. Prices also are subject to change without notice. BofA Merrill Lynch is under no obligation to update this report and BofA Merrill Lynch's ability to publish research on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Merrill Lynch will not update any fact, circumstance or opinion contained in this report.

Certain outstanding reports may contain discussions and/or investment opinions relating to securities, financial instruments and/or issuers that are no longer current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with MLPF&S or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Merrill Lynch nor any officer or employee of BofA Merrill Lynch accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this report or its contents.

Research Analysts

Europe

Ralf Preusser, CFA

Rates Strategist
MLI (UK)
+44 20 7995 7331
ralf.preusser@baml.com

Mark Capleton

Rates Strategist
MLI (UK)
+44 20 7995 6118
mark.capleton@baml.com

Sebastien Cross

Rates Strategist
MLI (UK)
+44 20 7996 7561
sebastien.cross@baml.com

Ruairi Hourihane

Rates Strategist
MLI (UK)
+44 20 7995 9531
ruairi.hourihane@baml.com

Sphia Salim

Rates Strategist
MLI (UK)
+44 20 7996 2227
sphia.salim@baml.com

Erjon Satko

Rates Strategist
MLI (UK)
+44 20 7996 5726
erjon.satko@baml.com

US

Shyam S.Rajan

Rates Strategist
MLPF&S
+1 646 855 9808
shyam.rajan@baml.com

Ralph Axel

Rates Strategist
MLPF&S
+1 646 855 6226
ralph.axel@baml.com

Mark Cabana, CFA

Rates Strategist
MLPF&S
+1 646 855 9591
mark.cabana@baml.com

Paul Ciana, CMT

Technical Strategist
MLPF&S
+1 646 855 6007
paul.ciana@baml.com

Carol Zhang

Rates Strategist
MLPF&S
+1 646 855 8311
carol.zhang@baml.com

Olivia Lima

Rates Strategist
MLPF&S
+1 646 855 8742
olivia.lima@baml.com

Pac Rim

Kana Ichiki

Rates Strategist
Merrill Lynch (Japan)
+81 3 6225 6317
kana.ichiki@baml.com

Tony Morriss

Rates Strategist/Economist
Merrill Lynch (Australia)
+61 2 9226 5023
tony.morriss@baml.com

Shuichi Ohsaki

Rates Strategist
Merrill Lynch (Japan)
+81 3 6225 7747
shuichi.ohsaki@baml.com

Phear Sam

Rates Strategist
Merrill Lynch (Australia)
+61 2 9226 5773
phear.sam@baml.com